Ref. No. 3517

ONKYO® SERVICE MANUAL

Integrated Stereo Amplifier
MODEL A-9310

MP	230V AC, 50Hz
MW	120V/220V AC, 50Hz/60Hz
MD	120V AC, 60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF PARTS.
WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

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ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

Power output :	50watts per channel, min. RMS at 8ohms, both channels driven from 20Hz to 20kHz with no more than 0.08% T.H.D.
	2×80watts at 4 ohms, 1kHz (DIN)
	2×60watts at 8 ohms, 1kHz (DIN)
Total Harmonic Distortion :	0.08% at rated power
IM Distortion :	0.08% at rated power
Damping Factor :	150 at 8 ohms
Frequency response :	15Hz - 50kHz, ±1dB
Input sensitivity/impedance :	
Phono :	2.5mV/50 kohms
Tuner/CD/Line :	150mV/25 kohms
Tape Play :	150mV/25 kohms
Output sensitivity/impedance	
Tape Rec :	150mV/3 kohms (phono)
Phono overload :	135mV RMS at 1kHz, 0.1% T.H.D
	(REC)
Bass control :	±8dB at 100Hz
Treble control :	±8dB at 10kHz
Loudness control :	±8dB at 100Hz
	±8dB at 10kHz
Signal-to-noise ratio (IHF-A)	
Phono :	80dB (5mV input)
Source Direct (CD) :	102dB (0.5V input)

General

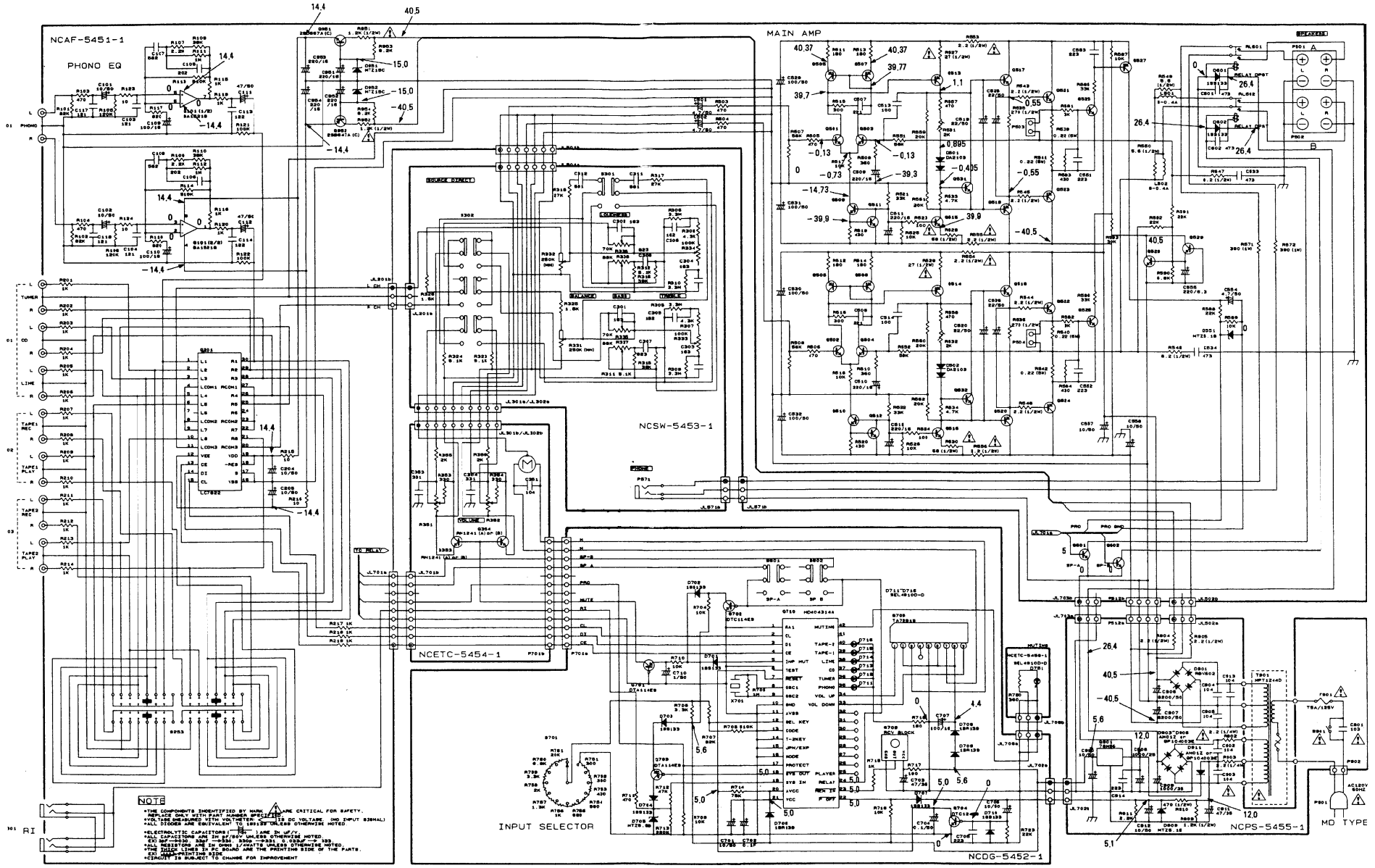
Power supply :	
European and	
Australian models :	AC 230V, 50Hz
U.S.A and Canadian models :	AC 230V, 60Hz
Worldwide models :	AC 120V and 220V switchable, 50Hz/60Hz
Power consumption :	180W, 240VA
Dimensions :	455 (W)×150 (H)×348 (D) mm
	17-15/16"×5-7/8"×13-16/11"
Weight :	7.9kg, 17.4lbs.

Remote control RC-286S

Transmitter :	Infraared
Signal range :	Approx. 5 meters, 16ft
Power supply :	Two "AA"batteries (1.5V×2)
Dimentions :	55 (W)×18 (H)×194 (D) mm
	2-3/16"×11/16"×7-5/8"
Weight :	100grams, 3.5oz.
	(including batteries)

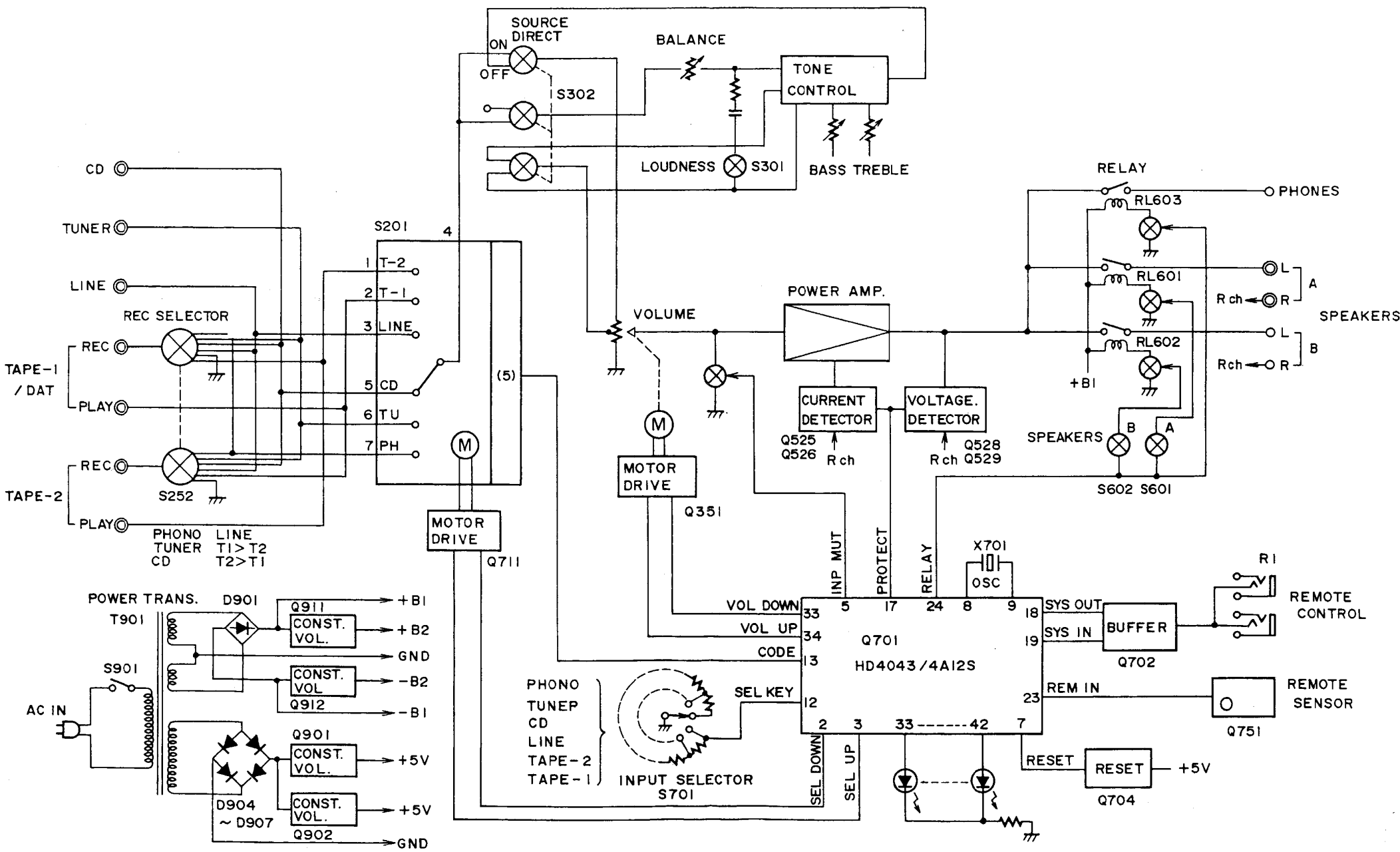
Specification and features are subject to change without notice.

SCHEMATIC DIAGRAM (120V MODEL)

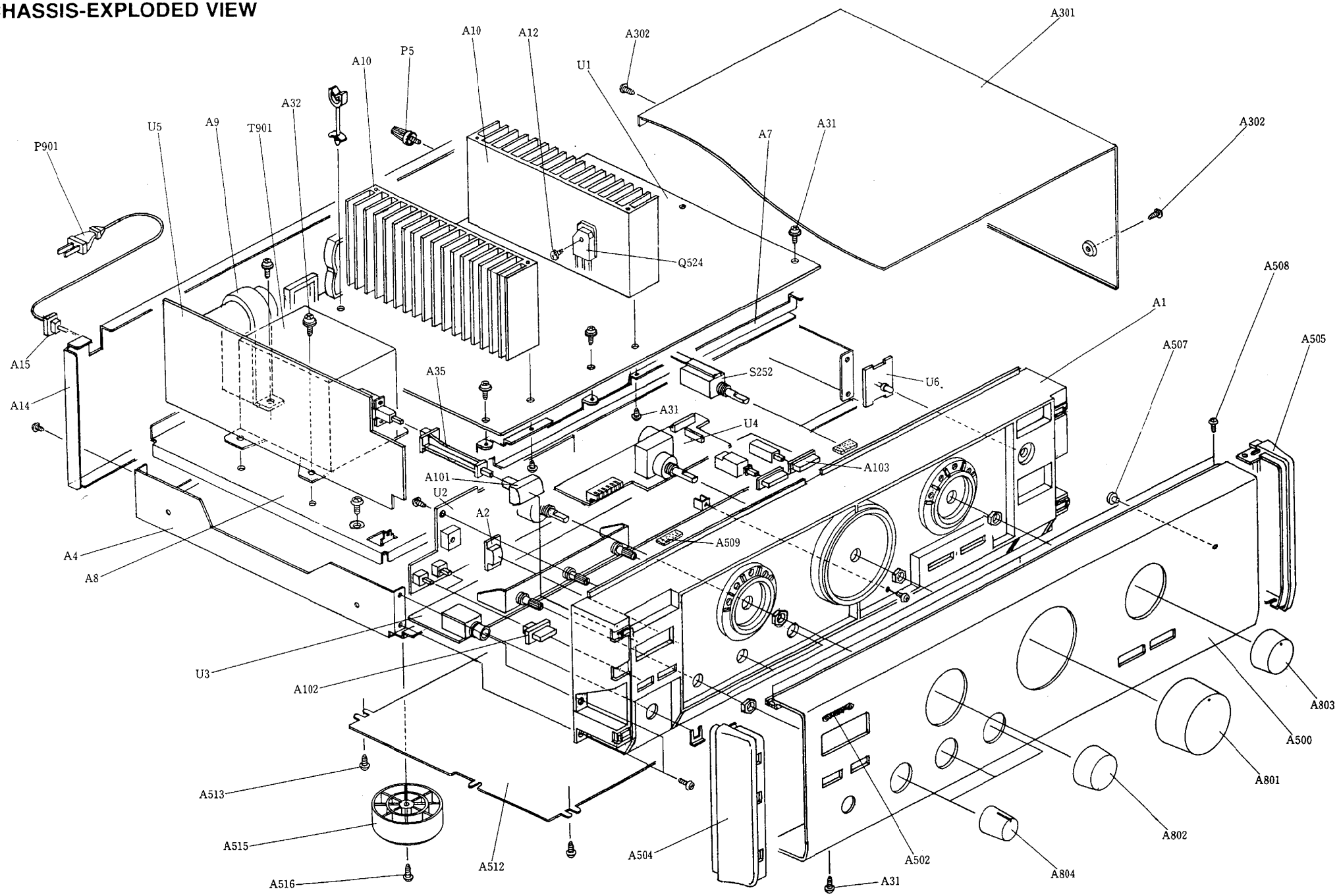


ONKYO CORPORATION

BLOCK DIAGRAM



CHASSIS-EXPLODED VIEW



ADJUSTMENT PROCEDURES

Adjustments and Checking the Protection Circuitry

1 . Preparations

1) Place the unit on the workbench. (There should be about 15mm of space between the base plate of the unit and work surface.)

2) Set up the unit as follows.

(1) No load

(2) No signal

(3) Volume turned all the way down

(4) speaker switch OFF

(5) Power switch OFF

Note) Check the following points before making adustments

(1) The power switch should be OFF.

(2) The interior of the unit should not be warm.

2 . Idling current adjstment

1) And after 4~6 minutes of heat running, readjust R531 and R532 according to the voltage at that times; 6.0~7.0mV

3 . Confirming operations.

1) Speaker relay

(1) The speaker relay turns ON after 5 seconds when power is ON.

(2) The speaker relay turns OFF immediately when power is OFF.

2) Over-voltage protector (Source Direct →ON)

(1) The speaker relay is OFF immediately when D.C. +1~+1.5V is put at CD-terminal. (NO load, One channel)

(2)The same as above when D.C. -1~-1.5V is put at CD-terminal.

Note) Do not connect load nor short speaker terminals.

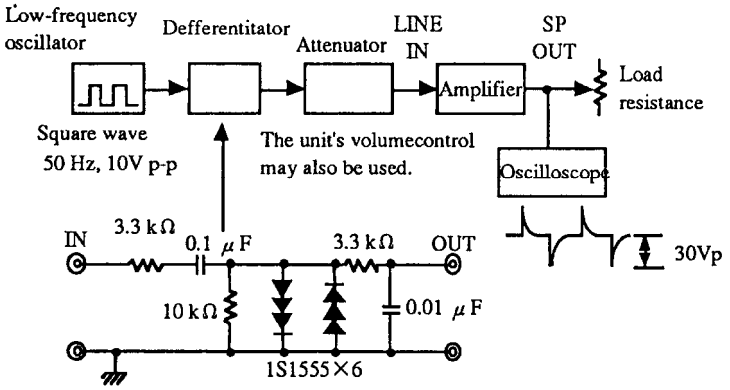
3) Over current protector

(1) The speaker relay must hold ON when output level at 2 ohms load is under clip-point.
(clip-point=10% T.H.D. input:CD-terminal 1kHz)

(2) The speaker relay must turns OFF immediately when 1.0 ohms load is connected at speaker terminals under the conditions that signal is put at CD-terminal by the designated circuit on 105% power supply voltage and output voltage is 30Vp-p.

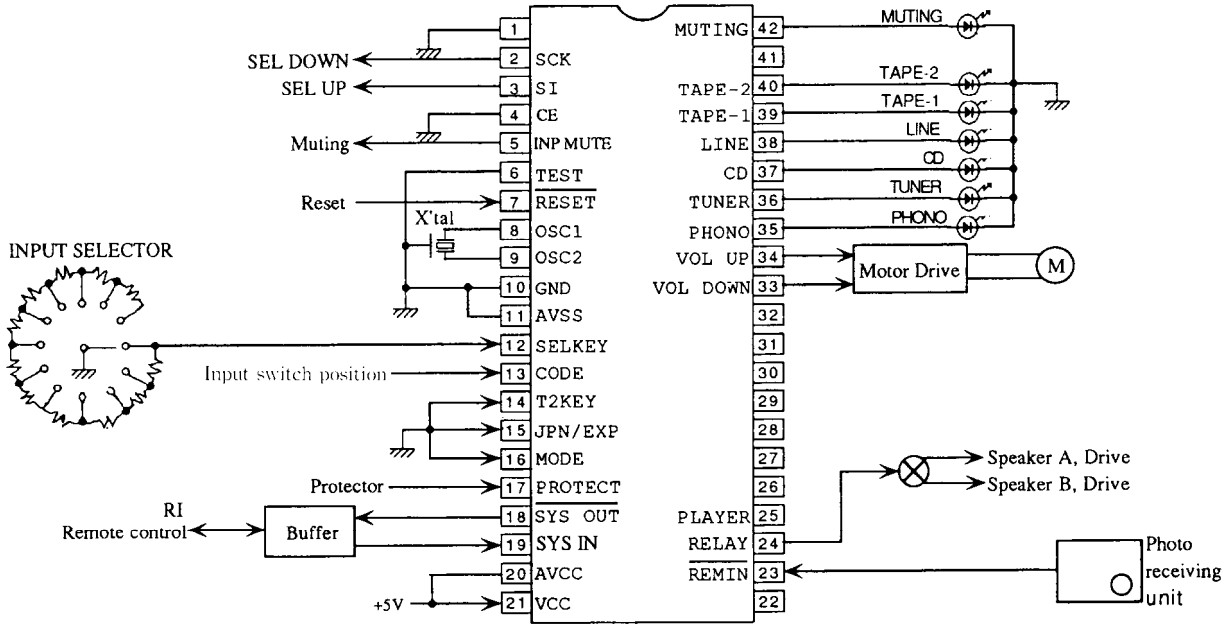
4) Remote control operation.

(1) Each key must operate properly for the amplifier, cassette deck, and CD.



IC BLOCK DIAGRAM

HD404314A12S



HD404314

Pin No.	CODE	FUNCTION	I / O	DESCRIPTION
1	RA1/Vdisp	------	-----	Not used, To be connected with GND.
2	R00/SCK	SEL DOWN / CL	OUT	UP/DOWN Output terminal for Input selector.
3	R01/SI	SEL UP / D1		
4	R02/SO	CE	-----	
5	R03/TOC	INP MUT	OUT	Muting output terminal. Active "H".
6	TEST	TEST	-----	Shipment Test. To be connected with GND.
7	$\overline{\text{RESET}}$	$\overline{\text{RESET}}$	IN	Input terminal for Reset signal. Active "L"
8	OSC1	Xtal	-----	Terminal for connecting with Ceramic oscillator (4MHz)
9	OSC2	Xtal	-----	
10	GND	GND	-----	Ground terminal
11	AVss	AVss	-----	Ground terminal of A/D converter
12	R30/AN0	SELKEY	IN	Input terminal for when changing over Input Selector. Through A/D conversion, the selector will be detector on its right or left rotation.
13	R31/AN1	CODE	IN	Code input terminal for detecting position of Rotary switch of Motor drive.
14	R32/AN2	T-2KEY	IN	Tape-2 Key entry terminal.
• 15	R33/AN3	JPN/EXP	IN	Input terminal for change-over between Japan model and Export model.

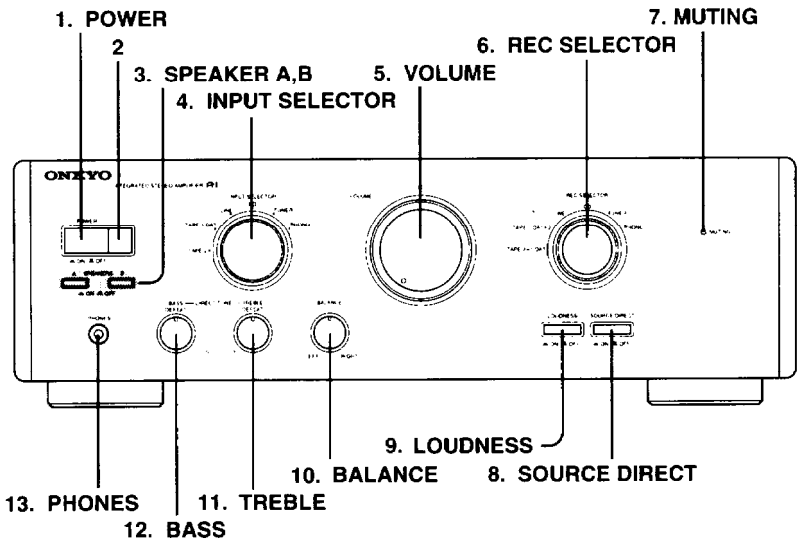
OPERATION	SEL UP	SEL DOWN
STOP	H	H
UP	H	L
DOWN	L	H

Pin No.	CODE	FUNCTION	I / O	DESCRIPTION
16	R40/AN4	MODE	IN	Input terminal for initialization to change over operation mode.
17	R41/AN5	PROTECT	IN	Input terminal for detecting protect operation.
18	R42/AN6	$\overline{\text{SYS OUT}}$	OUT	Output terminal for System Code.
19	R43/AN7	SYS IN	IN	Input terminal for System Code.
20	AVcc	AVcc	-----	Analog reference voltage for A/D conversion.
21	Vcc	+5V	-----	Power(+5V) terminal .
22	D0/INT0	$\overline{\text{POFF}}$	IN	Input terminal for Detecting Power suspension. However, "L" 100 μ S or under shall be ignored.
23	D1/INT1	$\overline{\text{REM IN}}$	IN	Remote control signal input terminal
24	D2/EVENB	RELAY	OUT	Output terminal for controlling relay. "H" when ON.
25	D3/BUZZ	PLAYER	OUT	Output terminal for Player control. H" will be output for 200mS if input PLAY/REJECT code for Remote control and set Input selector for PHONO.
26	D4/STOPC	------	-----	Not used
27	D5			
28	D6			
29	D7			
30	D8			
31	R80			
32	R81			
33	R81	VOL DOWN	OUT	UP / DOWN output terminal for Volume. Active "H".
34	R83	VOL UP		

OPERATION	VOL UP	VOL DOWN	
STOP	H	H	POWER ON
VOL UP	H	L	
VOL DOWN	L	H	
POWER OFF	L	L	

35	R10	PHONO	OUT	Output terminal for Input selector LED. Active "H".
36	R11	TUNER		
37	R12	CD		
38	R13	LINE		
39	R20	TAPE-1		
40	R21	TAPE-2		
41	R22	------	-----	Not used
42	R23	MUTING	OUT	Output terminal for Audio muting LED, Remote control

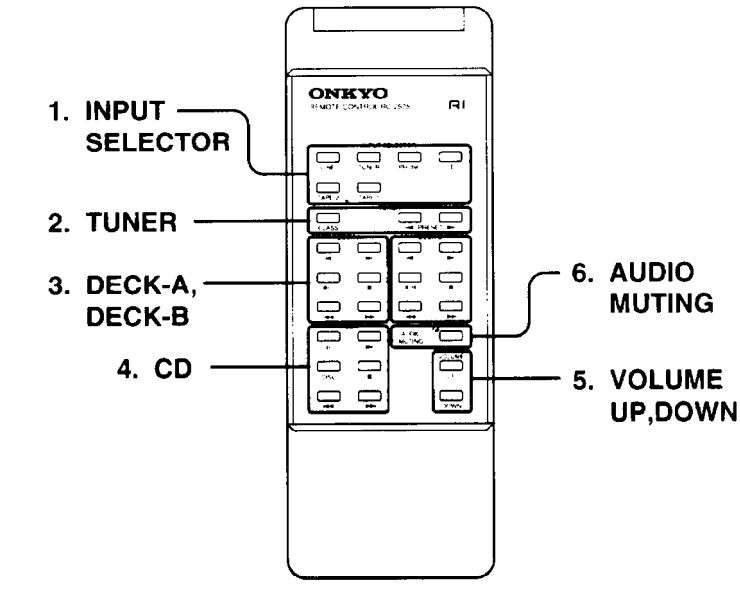
FRONT PANEL



Front panel

1. Power button
2. Remote control sensor
3. Speaker selector buttons
4. Input selector knob and indicator
5. Volume control knob
6. Recording selector knob
7. Muting indicator
8. Source Direct button
9. Loudness button
10. Balance control knob
11. Treble control knob
12. Bass control knob
13. Headphone jack

REMOTE CONTROL



Remote control

1. Input selector buttons
2. Tuner operation buttons
   - CLASS : Class selector button
   - PRESET : Preset memory down/ up
3. Tape operation buttons
   - ◄ : Reverse play button
   - ► : Forward play button
   - ◄◄ : Fast rewind button
   - ►► : Fast forward button
   - ■ : Stop button
   - ●/❚❚ : Record/pause button
4. CD operation buttons
   - ❚❚ : Pause button
   - ► : Play button
   - DISC : Disc button for CD changer
   - ⏮ : Down button
   - ⏭ : Up button
5. Volume control buttons
6. Audio muting button

CHASSIS-EXPLODED VIEW PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
A1	27110785DY	Front bracket
A2	28191593-1	Clear plate
A4	27100274	Chassis
A7	27130724	Bracket(C)
A8	27130749	Bracket(PT)
A9	27190940	Holder(CH)
A10	27160334AY	Heat sink
A11	223021	TBM-51W, 9043, Isolation sheet
A12	801433	3SMS8W.SW+14B(BC), Screw
A13	838130088	3TTB+8B, Screw
A14	27122070	Rear panel <P>
	27122071	Rear panel <W>
	27122110	Rear panel <D>
A15	27300750	Cord bushing
A30	82143006	3P+6FN(BC), Screw
A31	838130088	3TTB+8B, Screw
A32	830440089	4TTC+8C(BC), Screw
A35	27273155	Joint(POW)
A101	28324140	Knob(POW)
A102	28324882	Knob(SP)
A103	28324886	Knob(D)
A301	28184561Y	Top cover
A302	838430088	3TTB+8B(BC), Screw
A501	27211721	Front panel
A502	28135199	Badge
A503	8910301	CS-3(SUS), CS ring
A504	28125255-6Y	End cap(L)
A505	28125256-6Y	End cap(R)
A506	28198798Y	Facet(SEL)
A507	28198778	Facet
A508	838130088	3TTB+8B, Screw
A509	28141288	Cushion
A510	29110029	W=3, DF Tape
A512	28153118	Bottom board
A513	838130088	3TTB+8B, Screw
A515	27175300Y	Leg AS
A516	838130088	3TTB+8B, Screw
A801	28324883	Knob(VOL)
A802	28324884A	KnobSEL)
A803	28324885A	Knob(REC)
A804	28324887A	Knob(TONE)

CIRCUIT NO.	PART NO.	DESCRIPTION
F901	⚠ 252164	5A-UL/T-237, Fuse <W>
F901	⚠ 252164	5A-UL/T-237, Fuse <D>
F902	⚠ 252074	2A-SE-EAK, Fuse
P5	25060044	GND terminal
P901	⚠ 253193HIT or	AS-CEE, AC Cord
	⚠ 253192HIT or	AS-UC-6#18, (SPT-2), AC CORD or
	⚠ 253194MAR	AS-UC-6#18, AC CORD <D>
Q521,Q522	2201704 or	2SC3855-Y, Transistor or
	2201706	2SC3855-P, Transistor
Q523,Q524	2201694 or	2SA1491-Y, Transistor or
	2201696	2SA1491-P, Transistor
S252	25030369A	NRSF-106-, 20BU, Rotary switch
T901	⚠ 2301116	NPT-1244P, Power transformer
	⚠ 2301117	NPT-1244DG, Power transformer <W>
	⚠ 2301115	NPT-1244D, Power transformer <D>
U1	1A587551-1Y	NAAF-5451-1, AF-AS
	1A587551-1BY	NAAF-5451-1B, AF-AS <D>
U2	1A587552-1Y	NADG-5452-1, DG-AS
U3	1A587553-1Y	NASW-5453-1, SW-AS
U4	1A587554-1Y	NAETC-5454-1, ETC-AS
U5	1A587555-1Y	NAPS-5455-1, PS-AS
	1A587555-1AY	NAPS-5455-1A, PS-AS <W>
	1A587552-1BY	NAPS-5455-1B, PS-AS <D>
U6	1A587556-1Y	NAETC-5456-1, ETC-AS
U7	1A587557-1Y	NASW-5457-1, SW-AS <W>

NOTE: <P> : 230V model only
<W> : Worldwide model only
<D> : 120V model only

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART

PRINTED CIRCUIT BOARD – PARTS LIST

Main circuit PC board Parts list (NAAF-5451-1/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q101	22240111	BA15218
Q201	22240270	LC7822N
	Transistors	
Q501,Q503	2213677 or	2SC3067-G or
	2213678	2SC3067-H
Q505,Q506	2212125 or	2SA1048-GR or
	2213355	2SA933S-S
Q507,Q508	2212125	2SA1048-GR
	2213355	2SA933S-S
Q509,Q510	2211732 or	2SC1845-F or
	2211733	2SC1845-E
Q511,Q512	2212115 or	2SC2458-GR or
	2213284 or	2SC1740S-R or
Q513,Q514	2211353 or	2SA949-O or
	2211354	2SA949-Y
Q515,Q516	2211633 or	2SC2229-O or
	2211634	2SC2229-Y
Q517,Q518	2212653 or	2SC3421-O or
	2212654	2SC3421-Y
Q519,Q520	2212643 or	2SA1358-O or
	2212644	2SA1358-Y
Q525,Q526	2211732 or	2SC1845-F or
	2211733	2SC1845-E
Q527	2211792 or	2SA992-F or
	2211793	2SA992-E
Q528,Q529	2211732 or	2SC1845-F or
	2211733	2SC1845-E
Q531,Q532	2212115 or	2SC2458-GR or
	2213284	2SC1740S-R
Q601,Q602	2213650	DTD113ZS
Q951,Q952	2215163	2SD667A-C
	Diodes	
D501,D502	223168	DA210S
D551	224450512	MTZ5.1B, Zener
D601,D602	223163 or	1SS133 or
	223205 or	1SS270A or
	223222	WG713A
D951,D952	224451503	MTZ15C, Zener
	Coils	
L501,L502	231209	S-0.4A, S Coil
	Capacitors	
C101,C102	354781009	CE04W50V, 10M, ELECT C
C103,C104	374723915	ECQ-B50V, 391K, TF C <P,W>
	374721215	ECQ-B50V, 121K, TF C <D>
C105,C106	374722024	ECQ-B50V, 202J, TF C
C107,C108	374725624	ECQ-B50V, 562J, TF C
C109,C110	354741019	CE04W16V, 100M, ELECT C
C111,C112	354784709	CE04W50V, 47M, ELECT C
C113,C114	374721224	ECQ-B50V, 122J, TF C
C117,C118	374721215	ECQ-B50V, 121K, TF C
C119,C120	374722215	ECQ-B50V, 221K, TF C <P,W>
C204,C205	354781009	CE04W50V, 10M, ELECT C
C501,C502	354780479	CE04W50V, 4.7M, ELECT C
C505,C506	374721015	ECQ-B50V, 101K, TF C
C507,C508	374722215	ECQ-B50V, 221K, TF C
C509-C512	354742219	CE04W16V, 220M, ELECT C
C519-C526	354782209	CE04W50V, 22M, ELECT C
C529-C532	354781019	CE04W50V, 100M, ELECT C
C533,C534	374724734	ECQ-V50V, 473J, TF C
C541-C544	374721524	ECQ-B50V, 152J, TF C <P,W>
C545,C546	374721015	ECQ-B50V, 101K, TF C <P,W>
C554	354780479	CE04W50V, 4.7M, ELECT C
C555	354722219	CE04W6.3V, 220M, ELECT C
C557,C558	354781009	CE04W50V, 10M, ELECT C
C561,C562	374721024	ECQ-B50V, 102J, TF C <P,W>
C563,C564	374721024	ECQ-B50V, 102J, TF C <P,W>
C601,C602	374724734	ECQ-V50V, 473J, TF C
C951-C954	354742219	CE04W16V, 220M, ELECT C

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistors	
R527,R528	443522704	RS1/2WBJ, 27, METAL O R
R529,R530	443526804	RS1/2WBJ, 68, METAL O R
R531,R532	5210259	N06HR, 2KBC, TRIM R
R535,R536	443522714	RS1/2WBJ, 270, METAL O R
R539-R542	4000076	MPC74-5WK, 0.22, METAL P R
R543-R546	453530224	RNU1/2WCJ, 2.2, METAL R
R547,R548	453530824	RNU1/2WCJ, 8.2, METAL R
R549,R550	453530564	RNU1/2WCJ, 5.6, METAL R
R553-R556	453530224	RNU1/2WCJ, 2.2, METAL R
R571,R572	443623914	RS1WBJ, 390, METAL O R
R951,R952	443521224	RS1/2WBJ, 1.2K, METAL O R
	Switch	
S253	25065079	NSS-4643, Slide
	Relays	
RL601,RL602	25065339	NRL-2P5A, -DC24-046, Relay
	Plugs, Jacks	
P503	25055038	NPLG-2P29, Pin plug
P504	25055038	NPLG-2P29, Pin plug
P101	25045401	NPJ-2PDBL226, Pin jack
P201	25045411	NPJ-6PDBL236, Pin jack
P202	25045410	NPJ-4PDBL235, Pin jack
P203	25045410	NPJ-4PDBL235, Pin jack
P801	25045330	NPJ-2PDBL184, Pin jack
P501	25060125	NTM-8PDMN058, Trimmer
P512b	25055167	NPLG-4P151, Pin plug
	27141059	End plate
	Holders	
JL701a	25051113	NSCT-9P900, Wire holder
	27301779	HL-38-0, Clamp

Microprocessor PC board Parts list (NADG-5452-1)

	Remote control sensor	
Q709	24130010	HC-312
	ICs	
Q708	22240239	TA7291S
Q710	22240899	HD404314A99S
	Transistors	
Q701-Q704	2213510	DTA114ES
	Diodes	
D701-D704	223163	1SS133
D705	224450562	MTZ5.6B, Zener
D706	22380032	1SR139-100
D707,D710	223163	1SS133
D708,D709	22380032	1SR139-100
D711-D716	225291D	SEL4910D-D, LED
	Resonator	
X701	3010150	CST4.00MGW
	Capacitors	
C701,C706	354781009	CE04W50V, 10M, ELECT C
C702	3000076	EECS5R5T104, EDL C
C703	354764709	CE04W35V, 47M, ELECT C
C704	354781099	CE04W50V, 0.1M, ELECT C
C705	374722234	ECQ-B50V, 223J, TF C
C707	354741019	CE04W16V, 100M, ELECT C
C710	354780109	CE04W50V, 1M, ELECT C
	Switches	
S601	25035653	NPS-122-L605
S602	25035653	NPS-122-L605
S701	25030359	NRSF-112, -20RM, Rotary

CIRCUIT NO.	PART NO.	DESCRIPTION
	Plug, Wire holders	
P701a	25055660	NPLG-13P616, Pin plug
JL706a	25051107	NSCT-3P894, Wire holder
JL702a	25051107	NSCT-3P894, Wire holder

Tone control circuit PC board Parts list (NADG-5453-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C301-C304	374721634Y	ECQ-B50V, 163J, TF C
C305,C306	374721824Y	ECQ-B50V, 182J, TF C
C307,C308	374728234Y	ECQ-V50V, 823J, TF C
C311,C312	374726814Y	ECQ-B50V, 681J, TF C
	Resistors	
R331,R332	5148107AY	N16RGMC, 250KMN25, Variable
R333,R334	5142002Y	N16RGM11C, 100K25, Variable
R335,R336	5144011Y	N16RQM11C, 70K88K25, Variable
	Switches, Jack	
S301	25035407Y	NPS-122-L371
S302	25035654AY	NPS-162-L606
	25065425	SCREW TRMM3
P571	25045164	HLJ4317, -01-3020, Jack
	Wire holders	
JL201a,JL571a	25051107	NSCT-3P894, Wire holder
JL501a	25051111	NSCT-7P898, Wire holder
JL301a,JL302a	25051114	NSCT-10P901, Wire holder

Volume control circuit PC board Parts list (NAETC-5454-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q353,Q354	2213631 or	RN1241-A or
	2213632	RN1241-B
	Capacitors	
C351	374721044Y	ECQ-V50V, 104J, TF C
C353,C254	374723315Y	ECQ-B50V, 331K, TF C
	Resistors	
R351,R352	5104329AY	N16RGM, 5OKBT25F, Variable
	Sockets	
P701b	25051047Y	NSCT-13P834, Socket
JL301b	25050274Y	NSCT-10P102, 2.5mm TOP, Wire trap
JL701b	25050273Y	NSCT-9P101, 2.5mm TOP, Wire trap
JL302b	25050274Y	NSCT-10P102, Wire trap
	25065425	SCREW TRMM3

Power supply circuit PC board Parts list (NAPS-5455-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q901	222780565JRC	78M56
	Diodes	
D901	22380038F	RBV602
D903	22380046 or	AM01Z or
	22380035	GP104003E
D904-D906	22380046 or	AM01Z or
	22380035	GP104003E
D909	224450512Y	MTZ5.1B, Zener
D911	22380046 or	AM01Z or
	22380035	GP104003E

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C901	⚠ 3500065AY	DE7150FZ103P, AC400V/125V, IS C
C902,C903	374721044Y	ECQ-V50V, 104J, TF C
C904,C905	374731044Y	ECQ-V100V, 104J, TF C
C906,C907	3504279 or	CE92W50V, 8200M, ELECT C or
	3504245	CE62W50V, 8200M, ELECT C
C908,C909	354751029Y	CE04W25V, 1000M, ELECT C
C910,C912	354781009Y	CE04W50V, 10M, ELECT C
C911	354784709Y	CE04W50V, 47M, ELECT C
C913	374731044Y	ECQ-V100V, 104J, TF C
	Resistors	
R902,R903	4500055	RNU1/4WJ, 2.2, METAL R
R904,R905	453530224Y	RNU1/2WCJ, 2.2, METAL R
R909	443521224Y	RS1/2WBJ, 1.2K, METAL O R
R910	443524714Y	RS1/2WBJ, 470, METAL O R
	Switch	
S901	⚠ 25035550Y	NPS-111, -L512P
F901a	⚠ 25050065Y	YSH403T, Fuse holder <D>
F902a	⚠ 25050065Y	YSH403T, Fuse holder <P,W>
P902	⚠ 25055675Y	NPLG-2P631, Pin plug
JL502a,JL703a	25051107	NSCT-3P894, Wire holder
JL702b	25050267Y	NSCT-3P95, 2.5mm TOP, Wire trap
P512a	2009990301AY	NSAS-4P0435, Socket AS
	838130088Y	3TTB+8B, Screw

Muting indicator circuit PC board Parts list (NAETC-5456-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diode	
D751	225291D	SEL4910D-D
	Resistor	
R750	417342614Y	R16J360
	Wire holder	
JL706b	25051107	NSCT-3P894, Wire holder

Voltage selector switch PC board Parts list (NASW-5457-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Switch	
S902	⚠ 25065437Y	NSS-22157P, Slide

NOTE: <P> : 230V model only
<W> : Worldwide model only
<D> : 120V model only

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART

PRECAUTIONS

1 . Replacing the fuses

For continued protection against risk fire, replace only with same type and same rating fuse.

CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252164	5A-UL/T-237, Fuse (120V/220V models)
F902	252074	2A-SE-EAK, Fuse

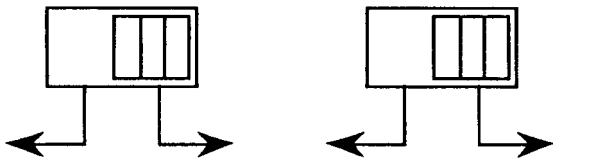
2 . Insulation resistance measurement (Only U.S.A model)

Connect the insulating-resistance tester between the plug of power supply cable and terminal GND on the back panel. Specifications; More than 10MΩ at 500V.

3 . Voltage Selector (Rear Panel)

Worldwide models are equipped with a voltage selector to conform to local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before plugging in the unit. Models without a voltage selector can only be used in areas where the power supply is the same as that of the unit.

VOLTAGE SELECTOR



at AC120V at AC 220V

Setting the voltage selector

1 . Determine the proper for voltage for your area: 220V or 120V.
2 . If the preset voltage is not proper for your area, insert a screwdriver into the groove in the switch. Slide the switch all the way to the right (120V) or to the left (220V), which-ever is proper.

PARTS LIST OF PACKING

CIRCUIT NO.	PART NO.	DESCRIPTION
1	29052881Y	Carton
2	29091651BY	Pad(L)
3	29091652CY	Pad(R)
	29360404	SN Sheet
4	29100034-1Y	850×650, Poly bag
	261504	W=30, Paper tape
5	282321	Staple
	282301	Staple
6	29110071	W=50, PP Tape
	29110098	W=50, PP Tape
7	Accessary bag ass'y	
	24140286Y	RC-286S, Remote control
	3010194	UM-3, Battery
	2010200	3.5Mini plug, Cord AS
	29342141Y	Instraction manual(E)
	29342142Y	Instraction manual(U7)
	29342144Y	Instraction manual(U3) <W>
	29100097-1Y	350×250, Poly bag
	29365019B	Wranty card(E) <N>
	25055040	CV-K-2, Conversion plug <W>
	29361786	Label <W>
	29358002K	SS List <N>
	29361894	UPC Label <N>
	29360778	Label flash <N>

NOTE: <P> : 230V model only
<W> : Worldwide model only
<D> : 120V model only
<N> : U.S.A. model only

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